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A MONOGRAPH OF THE TRIBE BASSINI.

BY G. C. DAVIS.

This tribe is characterized primarily by the form of the mandibles, which have the superior tooth divided or notched at the tip, so that in appearance there are three teeth to each mandible. It is further characterized by having the head broader than deep, clypeus separated; antennæ filiform, composed of from twenty to twenty-five joints, the first one cup-shaped, irregularly and diagonally truncated, the second much smaller, considerably inserted in the first, the third cylindrical and longer than those following it, thorax short, broad, narrowing gradually posteriorly; abdomen broadly sessile, composed usually of six segments, the first of which is often traversed by two longitudinal carinæ, and sometimes the first two or three segments are crossed by a transverse groove (genus *Bassus*); ovipositor short, often not exerted. The general form is short and thick set, though the smallest species (genus *Promethus*) are more slender. The sexes differ by the ♂ being smaller and less robust; they also differ in color markings, the most notable of which is the entire yellow face of the ♂, never found in the ♀, and in the other yellow markings which are more largely developed in the ♂ than in the ♀.

In the immature stage, Bassini are well known as parasitic on Syrphus fly larvæ. The individual host of the various species seems to be unknown. In our rearings, *Bassus scutellaris* was bred from a Syrphus larva on rag weed, August 31st, and we have reared *Bassus latatorius*, *Syrphoctonus agilis* and *Promethus costalis* from Syrphus larvæ feeding on *Aphis brassicæ*. To Mr. Ashmead we are indebted for the note on finding *Bassus orbitalis* and *Syrphoctonus pacificus* parasitic on Syrphus larvæ feeding on the same. He also reports the rearing of both sexes of *Syrphoctonus pleuralis* from a Syrphus puparium on rose. The species do not seem to confine themselves to any one species of Syrphidæ. Mr. Cresson has a ♂ and ♀ of *Syrphoctonus agilis* reared from a species of *Sphærophoria*, while this year we have reared the same species from quite a different puparium taken on willow. We have reared *Bassus latatorius* from several entirely different puparia. In Europe *B. latatorius* has been found

parasitic even on other orders as Vanvollenhoven refers to Tischbein, who bred a specimen from the coleopterous larva of *Adimonia rustica*, and Reissig, the same species from a Tortrices.

All specimens having the distinctively characteristic teeth, spoken of above, were first classified under the genus *Bassus* by Fallin in 1813, although it is true that the name had already been used by Fabricius in 1804 in the "Systema Piezatorum," but with a far more general and indefinite classification. In 1868, Foerster, after years of work and study on the Ichneumonidæ, wrote a synopsis of the family in which he made the old genus *Bassus* a family, and still further restricted the genus *Bassus* as one of the genera in this family. His family Bassidæ, or what is now considered a tribe in other orders, is represented by ten different genera, six of which are found in our American fauna. The characters used are plain, easy to determine, and will greatly aid in a further and closer classification of our old genus *Bassus*.

His synopsis is as follows :

The basal segment of abdomen with a cross suture.....1. **Bassus** Grav.
The basal segment of abdomen without a cross suture.

Wings without areolet.

Face perfectly smooth.

Antennæ with more than twenty joints..... 2. **Promethus** Foers.
Antennæ with twenty joints or less.

Clypeus very broad, the spiracles of the same separated farther than the margins of the eyes3. **Bioblapsis** Foers.

Clypeus not very broad, the spiracles not separated farther than the margins of the eyes.....4. **Liopsis** Foers.

Face finely shagreened.

Metanotum more or less areolated 5. **Zootrephe** Foers.

Metanotum not areolated.....6. **Syrphoctonus** Foers.

Wings with an areolet.

Metanotum areolated.

The longer spur of the hind tibiæ extending half the length of the first tarsal joint7. **Aniarophron** Foers.

The longer spur of the hind tibiæ not extending half the length of the first tarsal joint8. **Phthorima** Foers.

Metanotum not areolated.

Base of second segment bicarinate, venter of the same indented.

9. **Enizemum** Foers.

Base of the second segment without ridge, venter of the same not indented.

10. **Homotropus** Foers.

It is somewhat surprising at the number of synonyms found in monographing the tribe. These are mostly due to the great difference in color markings of the sexes, the male and female of the same

species being often described as two different species. Through the kindness of those having the types of Messrs. Cresson, Ashmead and Provancher in charge, I have been enabled to study the types, with the exception of one or two of Provancher's, and compared them carefully. I have also found specimens comparing well with descriptions made by Walsh, and with Mr. Cresson's large collection to work with, have succeeded in much the more thoroughly systematizing the tribe than could otherwise have been done. More than this, most of the species were originally described from a single specimen or two of only one sex. As both sexes are now known of a large share of the species (21 of the 29) and there was much more material at hand for description, the monograph did not seem complete without a short description of each species, which will enable the determination of each sex and a more definite of the species than otherwise could be.

BASSUS Grav.

Posterior tibiæ black, with broad white band.

Abdomen rufous, black at base and apex; tips of tibiæ usually red.

lætatorius Fabr.

Abdomen black only at apex..... var. **sycephanta** Walsh.

Abdomen black, with only terminal parts of segments 2, 3 and 4 rufous; tip of tibiæ red, with a black annulus between the red and white.

var. **terminalis**.

Abdomen black, marked more or less with pale spots or bands; if middle segments are margined with rufous, the posterior tibiæ not red at tips.

Pleurae black and yellow..... **orbitalis** Cr.

Pleura and sternum honey-yellow..... **scutellaris** Cr.

Posterior tibiæ white, black at tips.

Pleura black..... **concinus** Cr.

Pleura in part rufous..... **pulchripes** Prov.

Bassus lætatorius Fabr. (*Ichneumon*) Syst. Piez. p. 63.

B. tripicticus Walsh, St. Louis Acad. of Sci. iii, 85, ♂ ♀.

♀.—Length 6 mm. Head, thorax, base and tip of abdomen, hind tarsi, base and lower middle of hind tibiæ, black; four anterior legs, posterior coxæ, femora, and often tips of tibiæ, tip of abdominal segment 1, whole of 2 and 3, and more or less of 4, rufous; anterior orbits, mouth, tegulæ, spot in front, line beneath, cuneiform spots on mesonotum, scutellum, post-scutellum, and band on posterior tibiæ, white.

♂.—Differs only in having the face, scape beneath and a stripe on pleura, yellowish white.

Var. *sycephanta* Walsh, differs in having the basal segment of the abdomen rufous; the metathorax also is rufous sometimes in this variety.

Var. *terminalis*.—For the want of a better name this dark variety may be known as *terminalis*. It has only the terminal half of segments 2, 3 and 4 of the abdomen rufous.

This is one of the most common and wide-spread species in America and Europe.

Bassus orbitalis Cr., Proc. Ent. Soc. Phila. iv, 272, ♀.

B. cinctulus Cr., Proc. Acad. Nat. Sci. Phila. 1878, 375, ♂ ♀.

B. orbitalis Ashm., Proc. U. S. Nat. Mus. xii, 439, ♀.

♀.—Length 5-7 mm. Black; broad orbital lines, sometimes spot on face, mouth, tegulae, spot in front, line beneath wings, line on margin of mesonotum often recurving into two parallel lines in the centre, scutellum, post-scutellum, broad central band on hind tibiae and more or less of abdomen at tip of segments, yellowish white. Base and tip of posterior tibiae and hind tarsi black; four anterior coxae and trochanters variable; metathorax coarsely punctured, rugose; first segment of the abdomen with two parallel carinae.

♂.—Has the face and scape beneath white and usually most of the abdominal segments margined with yellowish white, which varies to ferruginous. It is the *cinctulus* of Cresson.

Fifteen female and twenty-three male specimens from Colorado, Nevada, California, Montana, Oregon, New York, New Hampshire and Ottawa, Canada.

Bassus scutellaris Cr., Trans. Amer. Ent. Soc. ii, 112.

♀.—Length 4-6.5 mm. Black; pleura, sternum, and most of legs, honey-yellow; orbits, spot on front, mouth, tegulae, spot in front below and above, scutellum, post-scutellum, annulus on posterior tibiae, and more or less of the margins of the abdomen, white; remainder of posterior tibiae and tarsi black; metathorax and first three segments of abdomen, from base to transverse groove, rugose; deeply punctured.

♂.—Differs only in having face, scape beneath, and four anterior coxae and trochanters white.

Five female and two male specimens from Illinois, Michigan, Ottawa (Canada), Georgia, Virginia and Mt. Hood, Oregon.

Bassus concinnus Cr., Trans. Amer. Ent. Soc. ii, 111.

♀.—Length 5.5 mm. Black, legs honey-yellow, except the trochanters and anterior coxae, which are yellowish white; posterior tibiae, which are white, black at tips, and posterior tarsi which are black. The following parts are marked with yellowish white: anterior orbits, mouth, tegulae, spot in front, above and below, scutellum and post-scutellum; metathorax and base of abdomen coarsely and deeply punctured as in *scutellaris*; first segment with two distinct carinae.

♂.—Same, except entire face, underside of antennae and four anterior legs, white; the terminal portions of the abdominal segments are slightly rufous.

Two female specimens from Connecticut, and one male from Mass.

Bussus pulchripes Prov., Faune Ent. Can. ii, 428.

♀.—Length 5-7.5 mm. Black, with pleura, scutellum usually, and a patch in front of it, rufous. Legs variable from rufous to almost white; posterior tarsi, except basal segment, which is white, and tip of posterior tibiae black; mouth, short orbital lines in front, tegulae, spot in front, line below, broad line on margin

of mesonotum, line on side between meso- and metathorax, tip of scutellum and post-scutellum reddish yellow. One ♀ has the entire mesothorax rufous. Abdomen closely punctured and covered with a fine sericeous pile.

♂.—Has the face, scape beneath, prosternum, more or less of pleura, and generally the legs, except posterior femora, white.

Seven female and six male specimens; two from New Hampshire, one from Ottawa, and the remainder from Colorado.

PROMETHUS Foerster.

Mesonotum black, without yellow markings. **costalis** Prov.

Mesonotum with yellow bands in front of tegulæ.

♀.—Posterior coxæ black or yellow; ♂ with the face entirely yellow.

elongatus Prov.

♀.—Posterior coxæ same color as femora; ♂ face black, yellow down the centre. **ruficus** Walsh.

Promethus costalis Prov. (*Bassus*), Faun. Ent. Can. ii, 432, ♀.

B. longicornis Prov. ibid. 799, ♂.

B. aciculatus Prov. Add. Faune Hymen. 368, ♀.

B. auriculatus Prov., ibid. 429, ♀.

♀.—Length 4-5 mm. Head, thorax, base, and usually extremity of abdomen, shining black; mouth, tegulæ, spot in front and line beneath each wing, light yellow; antennæ slender, reddish brown. Wings large, very clear. veins and stigma light brown; areolet incomplete, pentangular in outline. Abdomen slender; first and second segments aciculated, tip of segment 2, all of 3 and 4, and base of 5, rufous. Legs, except coxæ, honey-yellow.

♂.—Differs only in having the entire face and scape beneath, light yellow. The three synonyms of *costalis* are all from descriptions of males.

Four female and four male specimens; Canada, New Hampshire, Montana, Washington.

Promethus elongatus Prov. (*Bassus*), Faune Ent. Can. ii, 799, ♂ ♀.

♀.—Length 4-5 mm. Black, with segments 2, 3 and 4 of the abdomen more or less red; antennæ reddish brown; spot beneath at base, mandibles, palpi, tegulæ, spot in front, beneath and above on mesonotum, trochanters and tips of coxæ yellowish white. Base of coxæ generally black; posterior tarsi dusky; remainder of legs honey-yellow; metathorax coarsely punctured; first segment of abdomen long, rectangular and rugose; second segment aciculated.

♂.—Differs in having the entire face, antennæ beneath and a crescent on the mesonotum yellowish white.

Four female and two male specimens from Canada, New Hampshire and Michigan.

Promethus ruficus Walsh (*Bassus*), Trans. St. Louis Acad. iii, 86, ♂.

♀. Length 5.5 mm. Black, polished; central portion of abdomen, legs and antennæ rufous; spot beneath antennæ extending on to sides of clypeus, mandibles, except tips, palpi, tegulæ, spot in front, lines beneath each wing, short line on mesonotum, transverse line on prosternum, diagonal line on mesopleuræ, all

the trochanters and four anterior coxæ, yellowish white. Abdomen beyond first segment strongly compressed; first segment black, densely punctured, second segment entirely rufous; third, fourth and fifth rufous, with black spot above; remaining segments black; venter rufous, except at tip. In one specimen the pleuræ have a rufous dash on them.

From Walsh's description of the ♂, it differs only in having the whole clypeus, all coxæ and trochanters, line on mesonotum, extending into a hook in front, yellowish white; antennæ brown-black, with scape beneath yellowish; and terminal third of segment two and all of segment three of the abdomen, rufous.

Male not seen; female described from two specimens sent me from Algonquin, Ill., by Dr. Nason, who has aided me greatly in finding many of Walsh's species. Whether these females belong with the male type is somewhat doubtful, though probable.

ZOOTREPHEs Foerster.

Abdomen black, segments more or less margined with white.

Pleuræ and sternum honey-yellow.....**frigidus** Cr.

Pleuræ and sternum black.

Posterior tibiæ fulvous, black at tips; segments of the abdomen with narrow inobscure yellow margins on segment 2.....**scapulatus** Prov.

Posterior tibiæ entirely fulvous, segments of abdomen with broad yellow margins.....**maudæ** n. sp.

Abdomen with the segments more or less rufous.

First segment of the abdomen longitudinally carinated with a groove between.

Scutellum yellow.....**saginatus** Prov.

Scutellum black.....**antennatus** n. sp.

First segment of abdomen even and oval.

Scutellum and base of abdominal segments black..**ichneumonides** Prov.

Scutellum black or reddish, segments 3 and 4 always rufous.

montanus n. sp.

Scutellum yellow, segments 2 and 3 rufous.....**cingulatus** Prov.

Zootrephe **frigidus** Cr. (*Bassus*), Trans. Amer. Ent. Soc. ii, 111, ♀.

♀.—Length 5.5 mm. Black, with pleuræ, entire sternum and legs, except posterior tibiæ and tarsi, honey-yellow; labrum, tegulæ, base of the segments of posterior tarsi, posterior tibiæ at base and a broad annulus in the centre, white. Thorax and first abdominal segment strongly carinated; the tip of the segment shows some evidence of the cross suture.

Only Mr. Cresson's type from Hudson Bay seen; ♂ not known.

Zootrephe **scapulatus** Prov. (*Bassus*), Faune Ent. Can. ii, 798, ♀.

♀.—Length 6. mm. Black, robust, with mouth, large orbital lines in front, tegulæ, spot in front, spots above on mesonotum, spot on scutellum and front coxæ, yellowish white. Legs fulvous, with tips of posterior tibiæ and their tarsi fuscous. Metathorax coarsely punctured, areolated, and aciculated in the large centrax area. Abdomen compressed at the extremity, segments 1, 2 and 3 coarsely punctured; segment 2 with a narrow, rather unobscure, pale yellow line at tip.

Provancher's type, collected at Cape Rouge (near Quebec), Can., is the only specimen known to me.

Zootrephes inconstans n. sp.

♀.—Length 5 mm. Black and shining, except metathorax and first three segments of the abdomen, which are coarsely punctured. Large orbital lines in front, cheeks beneath, scape beneath, sometimes a spot on the front; mouth, except tips of mandibles, tegulæ, spot in front, another beneath, a small line on mesonotum, scutellum, all the trochanters, tips of the coxæ and margins of abdominal segments after the first, light yellow. In some specimens the bands are interrupted in the centre; the bands are broadest on segments 2 and 3, sometimes broad on 4; coxæ and posterior femora black at base, remainder of legs a dusky honey-yellow; antennæ long, pubescent, dark brown. Wings hyaline, stigma large, dark brown. Abdomen, tibiæ and tarsi covered with short, distinct pubescence.

♂.—Stature and sculpture as in ♀. The color markings differ as follows: entire face, four anterior coxæ, triangular spots on prosternum, a crescent extending onto pleuræ back of middle coxæ, line beneath posterior of wings, small spot on scutellum, post-scutellum, and a short line at tip of first abdominal segment, yellowish white. The posterior femora are not black at base.

Described from four female and two male specimens from Washington, Nevada, Colorado and Massachusetts.

Zootrephes saginatus Prov. (*Bassus*), Faun. Ent. Can. ii, 432, ♀.

♀.—Length 4 mm. Head, thorax and basal segment of abdomen, except tip, black; three terminal segments reddish black; remainder of abdomen, most of the legs and antennæ, except basal joint, rufous; posterior coxæ variable with black and yellow, the others and all the trochanters yellow. The head and thorax are marked with yellow as follows: short orbital lines, mouth, tegulæ, line below, spot on mesonotum and scutellum.

♂.—Face, scape, prosternum and a stripe on mesopleuræ yellow, in addition to markings of ♀.

Two female and one male specimens from Canada and New Hampshire.

Zootrephes antennatus n. sp.

♀.—Length 5 mm. Head and thorax black, with narrow orbital lines each side of antennæ; mouth, including clypeus, tegulæ, small spot in front and spot beneath each wing, light fulvous. Abdomen rufous, except basal half of first segment and two terminal segments, which are black. Antennæ entirely rufous, four anterior coxæ and all the trochanters, yellow; remainder of legs rufous. Metathorax more or less rufous. Abdomen broad, clavate, depressed to the fifth segment then compressed; first segment and metathorax with high, coarse carinæ; margins of segments 2 and 3 and all of the following polished.

♂.—Differs only in having the entire face yellow.

Described from two female and two male specimens from Michigan, Illinois, South Dakota and Montana.

Zootrephes ichneumonides Prov. (*Bassus*), Faune Ent. Can. ii, 432, ♀ ♂.

♀.—Length 4.5 mm. Black, with the abdominal segments more or less margined with rufous; mouth, anterior orbits, tegulæ, spot in front, line beneath, line

on mesonotum, spot on scutellum, trochanters and anterior coxæ yellowish white; four posterior coxæ more or less black at base; remainder of legs fulvous. Abdomen depressed, first segment rugose, same of 2 and 3, except tips; segments 2 and 3 with a reddish band on the border.

This species is quite uncertain, and is only provisionally placed here. A female before me that differs in having no yellow markings on mesonotum and scutellum and with segment 4 of abdomen also margined with rufous belongs here, and led me to think that Provancher's species belongs in this genus, although the color markings differ and nothing was said of the carinated metathorax and basal segment of the abdomen. Several male specimens which answer the description have the face smooth and belong to *Promethus*, where the species probably belongs.

Zootrephes montanus n. sp.

♀.—Length 5-6 mm. Head, thorax, base and tip of abdomen black; remainder of abdomen and most of legs rufous. Large spot on centre of front; mouth, tegulæ, spot in front, line below cuneiform line on margins of metanotum, sometimes posterior margin of scutellum, trochanters and four anterior coxæ pale yellow; antennæ reddish brown, scape yellowish beneath; first segment of abdomen, except the tip, sometimes base of second segment, more or less of segment 5, and all of segment 6, black; metathorax faintly carinated, segments 1 and 2 of abdomen aciculated; segments beyond 3, compressed.

♂.—Differs in having the face, scape beneath, and usually all the coxæ pale yellow.

Described from nineteen female and twenty-three male specimens. All from Montana, except two from Nevada and one from South Haven, Mich.

Zootrephes cingulatus Prov. (*Bassus*), Faune Ent. Can. ii, 798, ♀.

♀.—Length 5.5 mm. Black, with abdomen in part rufous; mouth except mandibles at base, large anterior orbits reaching above the antennæ, tegulæ, spot in front, line beneath, line on mesonotum, line between meso- and metapleuræ, pyramidal spot on scutellum, trochanters and extremity of the coxæ, pale yellow; rest of the coxæ black; legs fulvous, posterior tarsi dusky. Abdomen robust, first segment rugose, segments 2 and 3 rufous, and 4 and 5 margined with rufous, remainder black.

♂.—Has scape beneath, entire face, prosternum, crescent on anterior mesonotum, four anterior coxæ and margins of first five abdominal segments, pale yellow.

Female described from Provancher's type; one male from New Hampshire.

SYRPHOCTONUS Foerster.

- Posterior tibiæ black, pale at base.....**agilis** Cr.
 Posterior tibiæ fulvous, black at tip.
 Pleura rufous, scutellum yellow.....**pleuralis** Cr.
 Pleura and scutellum black.....**robustus** n. sp.
 Posterior tibiæ fulvous, tarsi sometimes dusky.
 Abdomen entirely black.
 Face with white orbital lines.....**gillettii** n. sp.
 Face entirely black.....**mellipes** Prov.
 Abdomen black, with segments margined with white...**maculifrons** Cr.
 Abdomen more or less rufous.
 Thorax black.....**pacificus** Cr.
 Thorax red.....**cressonii** n. sp.

Syrphoctonus agilis Cr. (*Bassus*), Trans. Amer. Ent. Soc. ii, 111, ♂.

Bassus frontalis Cr., ibid. ♀.

Mesolius junctus Prov., Faune Ent. Can. ii, 797, ♀.

♀.—Length 5 mm. Black, with brown antennæ; spot on front, spot on mandibles, tegulæ, spot in front, line beneath, triangular spot on sides of mesonotum, tip of scutellum, line between meso- and metapleuræ and base of posterior tibiæ, white. Legs, except posterior tibiæ and tarsi, ferruginous.

♂.—Differs in having the entire face, underside of antennæ, entire sternum, front of pleuræ, post-scutellum and two spots at base of third segment of abdomen, yellow. Legs vary from rufous to a light fulvous.

Abdominal segments in the ♀ tend to show more or less signs of rufous, but in the ♂ this characteristic becomes still more marked.

Thirteen female, three male specimens; Illinois, Michigan, South Dakota, New Hampshire, Massachusetts, New Jersey, Pennsylvania, North Carolina and Ottawa, Canada.

Syrphoctonus pleuralis Cr. (*Bassus*), Trans. Amer. Ent. Soc. ii, 111, ♀.

Bassus syrphicola Ashm., Proc. U. S. Nat. Mus. xii, 439.

♀.—Length 7 mm. Black, with spot on front, mouth, tegulæ, spot in front, broad line on margins of mesonotum, scutellum, post-scutellum, and more or less distinct margins on abdominal segments, yellowish white. Legs, except posterior tibiæ and tarsi, venter, most of pleura and most of metathorax, honey-yellow.

♂.—Same as ♀, but the face, cheeks, antennæ beneath, and the entire ventral and lateral portion of the thorax, except large black spot beneath wings, are yellowish white.

Two female and one male specimens from California and Ohio.

Syrphoctonus robustus n. sp.

♂.—Length 7.5 mm. Black, with face, antennæ beneath, spot on cheeks, mouth and tegulæ, light yellow. Legs honey-yellow, except tips of posterior tibiæ and tarsi, which are nearly black. The entire body is rather coarsely punctured, with metathorax and first three segments of abdomen particularly so. Basal segment of abdomen with an elliptical ridge reaching nearly to the tip; segments of abdomen broad, depressed, narrowing at the tip after the third segment; antennæ reddish brown above. Wings hyaline with stigma and veins, except costal at base, brown.

Described from one specimen from Washington. Type in the Cresson collection.

Syrphoctonus gillettii n. sp.

♀.—Length 4.5 mm. Black, shining, with short yellowish pubescence; broad orbital lines in front, mouth, tegulae, spot in front and line beneath each wing, yellowish white. Legs honey-yellow; ocelli prominent; antennae black, reddish brown beneath. Wings hyaline, stigma and veins brown. Head and mesothorax very broad; metathorax, all of first and second abdominal segments and basal half of the third and fourth, coarsely and deeply punctured; segments of abdomen about equal width throughout.

Described from one female sent by Prof. C. P. Gillette, of Colorado, to whom I take pleasure in dedicating this species.

Syrphoctonus mellipes Prov. (*Bassus*), Add. Faune Hymen. 429.

♀.—Length 3.7 mm. Black, with legs pale yellow; metathorax bicarinate: first segment of abdomen aciculated and second punctured.

Canada. Type not seen, but probably does not belong here.

Syrphoctonus maculifrons Cr. (*Bassus*), Proc. Ent. Soc. Phila. iv, 272, ♀.

Bassus semifasciatus Walsh, Trans. St. Louis Acad. iii, 87, ♂.

♀.—Length 5–7.5 mm. Black, with a spot beneath antennae, triangular spot on each side near eyes, mouth, tegulae spot in front, line beneath, cuneiform line on mesonotum, scutellum, post-scutellum, and interrupted margins on abdominal segments, yellowish white. Legs rufous, except posterior tarsi, which are nearly black.

♂.—Has face, scape beneath, cheeks beneath, four anterior coxae and trochanters, crescent on mesosternum and longitudinal dash on pleurae, yellowish white; other markings as in ♀.

Fourteen specimens from California, Nevada, Colorado, Montana and Illinois.

Syrphoctonus pacificus Cr. (*Bassus*), Proc. Acad. Nat. Sci. 1878, 376, ♀.

Bassus xanthopsis Ashm., Proc. U. S. Nat. Mus. xii, 440, ♂.

♀.—Length 5–6 mm. Black, with the central part of abdomen rufous; oblong spot on front, mouth, tegulae, spot in front, line beneath, large cuneiform spot on margins of mesonotum, stripe between meso- and metapleurae; trochanters and more or less of coxae, yellowish white; most of posterior coxae and base of the others, black; remainder of legs rufous. Abdomen, with tip of segment 2, all of segment 3, and more or less of segment 4, rufous; segments 1 and 2 roughly sculptured.

♂.—Differs in having the entire face, scape beneath, prosternum, anterior margin of mesosternum continuing onto pleurae, longitudinal stripe on lower mesopleurae, more or less of four anterior legs and a more or less distinct yellow band or two dots at base of third abdominal segment, yellowish white; fourth and fifth segments of the abdomen usually black, margined with rufous.

Two female and seven male specimens from California, Nevada, Washington and Vancouver's Island.

Syrphoctonus cressonii n. sp.

♀.—Length 6 mm. Rufous, except head, posterior tarsi and segments of the abdomen beyond the third, which are reddish black. The following are yellow tinged with red: large central spot beneath antennæ on front, clypeus, mandibles, except teeth, which are black, palpi, tegulæ, spot in front, lines on margin of mesonotum, scutellum and post-scutellum. Wings hyaline, stigma large, brown; first three segments of abdomen finely punctured, the second somewhat aciculated at the sides. The form is broad, plump and short; antennæ wanting.

Described from one specimen from Nevada. This specimen is in the Cresson collection, and is dedicated to Mr. E. T. Cresson for the many kind favors shown me in the study of this tribe.

ENIZEMUM Foerster.

Enizemum tibiale Cr. (*Bassus*), Trans. Amer. Ent. Soc. ii, 110, ♀.

♀.—Length 6 mm. Black, with mandibles, palpi, costæ, tegulæ, faint line beneath, spots on margin of mesonotum, parallel capillary lines back of scutellum and post-scutellum, more or less of trochanters and base of posterior tibiæ, white; posterior tarsi, tibiæ, except base, and tips of femora black; remainder of legs, labrum, mesonotum, with lower part of pleuræ and scutellum, honey-yellow; antennæ brown. Wings slightly dusky. Abdomen with segments 1 and 2 and most of 3, coarsely punctured, rugose, and coarsely aciculated at the base of the segments; two marginal and two central carinæ on segment 1, the two latter extending close together about half the length of segment 2.

♂.—Differs in having the sternum and scutellum black; the entire face, scape beneath, prosternum, anterior part of mesonotum, trochanters and four anterior coxæ, yellowish white; rest of legs fulvous (except posterior tibiæ and tarsi, which are the same as with the ♀) and the three basal segments of the abdomen, which are coarsely longitudinally aciculated. This last character, with the different color markings, may make a new species when more material has been examined.

Three female and one male specimens from Illinois, Montana, Colorado and Canada.

HOMOTROPUS Foerster.

Abdomen black, or with yellow markings.

Posterior coxæ black, or black and yellow.....**humeralis** Prov.

Posterior coxæ same color as femora.

♀ with yellowish white capillary lines on scutellum and post-scutellum, and face without spot; ♂ without yellow markings on the abdomen.

bicapillaris Walsh.

♀ with sides of scutellum and usually the capillary lines yellowish white, face with white spot; ♂ with yellowish white band or spots at base of third abdominal segment.....var. **albopictus**.

Abdomen more or less rufous.

Face without orbital lines (♀).....**pallipennis** Prov.

Face with orbital lines (♀) or entirely yellow ♂.....**decoratus** Cr.

Homotropus humeralis Prov. (*Bassus*), Faune Ent. Can. ii, 429, ♂.

Bassus fuscitarsus Prov., ibid. 430, ♀.

♀.—Length 6 mm. Black, with elongate spot on face, sometimes obscure or-

bital lines, mouth, tegulæ, spot in front, line below, cuneiform band on margins of mesonotum, tip of scutellum and band between meso- and metapleuræ, yellowish white. Legs ferruginous, coxæ black and yellowish white; posterior tarsi and tips of tibiæ fuscous. Abdominal segments 1, and 2 and 3 at base finely rugose; tips of segments obscurely margined with red in some specimens.

♂.—Differs in having the face, scape beneath, prosternum, stripe on front of mesopleuræ, four anterior coxæ and trochanters, and two spots or a band at the base of third abdominal segment, yellowish white. In a few specimens this band is absent, while in others there is also a band at the base of the fourth segment.

Fourteen female and forty-six male specimens from S. California, Nevada, Washington, Colorado, Montana and Canada.

Homotropus bicapillaris Walsh (*Bassus*), Tr. St. Louis Acad. iii, 88, ♀.

Bassus belangeri Prov., Faune Ent. Can. ii, 430, ♀.

Bassus pectoralis Prov., ibid. 431, ♂.

♀.—Length 6 mm. Black, mouth, tegulæ, spot in front, line beneath, broad line on margins of mesonotum, line between meso- and metapleuræ and two capillary lines extending from wing to wing, passing over the tips of scutellum and post-scutellum where they become somewhat broadened, yellowish white; pleuræ, scutellum and clypeus have a tendency to be more or less rufous. Legs pale rufous, with posterior tarsi and tips of tibiæ, black. Abdomen with first segment scabrous and base of second coarsely aciculated, remainder of segments finely punctured; metathorax with long white pile.

♂.—Differs in having the face, scape beneath, band on anterior part of mesosternum, extending onto pleuræ, and four anterior coxæ and trochanters yellowish white.

Four female and one male specimens from Colorado, Illinois, New Hampshire and Canada.

Var. **albopictus** differs in the female having a large white spot on the front and the sides of the scutellum yellowish white, and in the ♂ having, besides the markings on the sides of the scutellum, a yellowish white band at the base of the third abdominal segment. The first abdominal segment varies from finely scabrous to coarsely aciculated.

Described from six female and three male specimens from Colorado, Washington, Canada and Michigan.

This may be a separate species, but as the specimens are so variable in the above markings, it seems best to only make them a variety of *bicapillaris*.

Homotropus pallipennis Prov. (*Bassus*), Faune Ent. Can. ii, 431, ♀.

♀.—Length 5.5 mm. Black, with abdominal segments 2, and 3 and 4 at tip at least, ferruginous; mouth, small spot in front, costæ, tegulæ, spot in front, line beneath, cuneiform line on margins of mesonotum, scutellum, post-scutellum with capillary line to wings, suture between meso- and metapleuræ, trochanters and four anterior coxæ yellowish white; posterior coxæ black, tipped with yellow; tips of posterior tibiæ and their tarsi dusky; remainder of legs honey-yellow. Wings hyaline, stigma yellowish brown; antennæ brown. Abdomen closely and finely punctured.

Description taken from Provancher's type and from one specimen in Mr. Cresson's collection, both females and from Canada; ♂ not known.

Homotropus decoratus Cr. (*Bassus*), Proc. Acad. Nat. Sci. Phila. 1878, 375, ♂.

♀.—Length 6 mm. Head and thorax black; abdomen, except base and tip, rufous; anterior orbits, scape beneath, spot below, mouth, tegulæ, spot in front, line beneath, cuneiform line on margins of mesonotum, posterior margin of scutellum and most four anterior coxæ light yellow; remainder of legs, except posterior tarsi, which are dark brown, rufous.

♂.—Differs in having the entire face, marginal lines on mesonotum recurved into parallel lines above, transverse and longitudinal lines on mesosternum and mesopleuræ and all coxæ and trochanters light yellow. The abdomen usually has more black on it in the ♂.

Eighteen female and seven male specimens from Nevada and Southern California.

LIST OF BASSINI.

BASSUS Grav.

1. lætatorius Fabr.
 tripicticus Walsh.
 a. sycophanta Walsh.
 b. terminalis Davis.
2. orbitalis Cr.
 cinctulus Cr.
 albicoxis Prov.
 amænus Prov.
 orbitalis Ashm.
3. scutellaris Cr.
4. concinnus Cr.
5. pulchripes Prov.

PROMETHUS Foers.

1. costalis Prov.
 longicornis Prov.
 aciculatus Prov.
 auriculatus Prov.
2. elongatus Prov.
3. rufierus Walsh.

ZOOTREPHES Foers.

1. frigidus Cr.
2. scapulatus Prov.
3. inconstans Davis.
4. saginatus Prov.
5. antennatus Davis.
6. ichneumonides* Prov.
7. montanus Davis.
8. cingulatus Prov.

SYRPHOCTONUS Foers.

1. agilis Cr.
 frontalis Cr.
 junctus Prov.
2. pleuralis Cr.
 syrphicola Ashm.
3. robustus Davis.
4. gillettii Davis.
5. mellipes* Prov.
6. maculifrons Cr.
 semifasciatus Walsh.
7. pacificus Cr.
 xanthopsis Ashm.
8. cressonii Davis.

ENIZEMUM Foers.

1. tibiale Cr.

HOMOTROPUS Foers.

1. humeralis Prov.
 fuscitarsus Prov.
2. bicapillaris Walsh.
 belangeri Prov.
 pectoralis Prov.
 a. albopictus Davis.
3. pallipennis Prov.
4. decoratus Cr.

* Only provisionally placed in the genus.

Bassus areolatus Prov. = *Lampronota punctulata*.

" *bouleti* Prov. = *Erromenus pedalis*.

" *cylindricus* Prov. = *Pimpla annulipes* ♂.

" *dorsalis* Prov. = *Plectiscus*.

" *gibbosus* Say = *Microdus*.

" *limitaris* Say = *Earinus*.

" *sanctus* Say = *Microdus*.

" *euuræ* Ashm. = *Tryphon*.

" *virginiensis* Ashm. = *Tryphon*.

DESCRIPTIONS OF A FEW NEW PIMPLINÆ.

BY G. C. DAVIS.

Lampronota sexcarinata n. sp. ♀.—Length 10 mm.; ovipositor 8 mm. Body entirely black, except margins of abdominal segments, which are sometimes rufous and covered with fine yellowish hair most conspicuous on the front and the least so on the abdomen; antennæ slender, reddish brown. Legs honey-yellow, posterior tibiæ and tarsi dark brown. Wings hyaline, nervures and stigma brown, tegulæ rufous to yellow, areolet wanting; parapsidal grooves distinct on mesonotum, converging into a broad, thickly punctured depression in front of scutellum; metathorax rugose and with six longitudinal carinæ, the two outer ones running just below the oblong spiracles; first segment of abdomen rugose, oval near base; segments 2 and 3 finely punctured.

Described from four female specimens taken in Michigan.

Lampronota angusta n. sp. ♀.—Length 7 mm.; ovipositor 7 mm. Body black, thickly punctured; orbital lines from vertex to insertion of antennæ, clypeus, base of mandibles, palpi, tegulæ, triangular line on margins of mesonotum, anterior coxæ and four anterior trochanters pale yellow; remainder of legs rufous, except four posterior tarsi, tibiæ, all but base, and base and tip of femora, which are dark brown, tarsal claws small; antennæ slender, black. Wings hyaline, areolet small, triangular; occiput full, ocelli elevated; front with a central carina extending from antennæ to clypeus; mesonotum dull, closely punctured, without parapsidal grooves; metanotum rugose, without carina; first segment of the abdomen coarsely rugose with a central longitudinal carina, second and most of third segment finely rugose.

Described from one female taken in July at the Michigan Agricultural College.

Lampronota bullata n. sp. ♀.—Length 11 mm.; ovipositor 5 mm. Black, with abdominal segments 2 and 3, in part, rufous. Head, thorax and legs coarsely punctured and covered with sparse, long, white pile; antennæ black, the front with a broad elevated ridge extending from their base to the clypeus; scutellum elevated, prominent; with a shining tubercle at the tip. Wings yellowish, dusky; areolet present, petiolate, with a large bulla on the outer vein at base so that it makes the areolet appear incomplete. The upper third of the second recurrent nervure is also covered with a bulla and is peculiar in that it has a branch about one-third mm. long extending out toward the apex of the wing in this bulla.